NORTH DAKOTA DEPARTMENT of HEALTH

What Are the Data Saying?

2018 Demographics Conference

Tuesday, March 20, 2018

Hilton Garden Inn

Tracy K. Miller, PhD, MPH
State Epidemiologist
tkmiller@nd.gov

Opioids, Overdoses, Deaths

- According to the Centers for Disease Control and Prevention (CDC), overdose deaths involving prescription opioids were five times higher in 2016 than 1999.[1]
- Sales of these prescription drugs have quadrupled.[3]
- From 1999 to 2016, more than 200,000 people have died in the U.S. from overdoses related to prescription opioids.[1,2]

1.Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017/ CDC. Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2016. Available at http://wonder.cdc.gov
2.Frenk SM, Porter KS, Paulozzi LJ. Prescription opioid analgesic use among adults: United States, 1999–2012. NCHS data brief, no 189. Hyattsville, MD: National Center for Health Statistics. 2015.
3.Ossiander EM. Using textual cause-of-death data to study drug poisoning Ossiander EM Am J Epidemiol. 2014 Apr 1;179(7):884-94. doi: 10.1093/aje/kwt333. Epub 2014 Feb 1112.)

NORTH DAKOTA DEPARTMENT of HEALTH

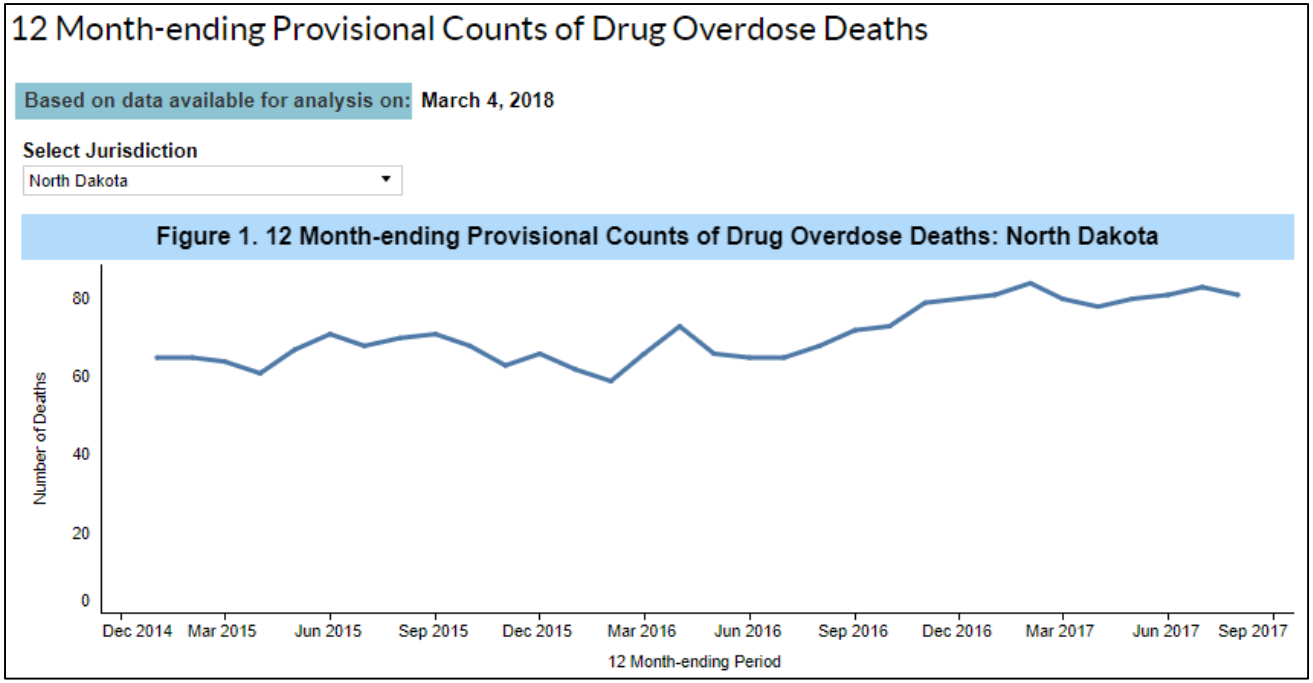
Vital Records Data

NORTH DAKOTA DEPARTMENT of HEALTH

National Center for Health Statistics

This data presents provisional* counts for drug overdose deaths based on a current flow of mortality data in the National Vital Statistics System. National provisional counts include deaths occurring within the 50 states and the District of Columbia.

This provisional data can be found here: www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm



*Provisional data are based on available records at the time of analysis and may not include all deaths that occurred during a given time period. Therefore, they should not be considered comparable with final data and are subject to change.

NORTH DAKOTA DEPARTMENT of HEALTH

North Dakota Vital Records

The Division of Vital Records provides registration and certification of the vital events that occur in North Dakota. These events include births, deaths, fetal deaths, marriages and divorces. We also provide statistical information on a wide range of categories relating to these events.

- www.ndhealth.gov/vital/
- Fun Fast Facts and Other information

Fast Facts for Births 2016

Oldest father	70
Oldest mother	49
Youngest father	15
Youngest mother	13
Largest live birth	15 lbs.,12oz.
Highest number in birth order	11th
Day most births occurred	August 24th (52 births)
Day fewest births occurred	February 17th (13 births)

NORTH DAKOTA DEPARTMENT of HEALTH

Drug-related Deaths in North Dakota

Year	Deaths*
2011	40
2012	42
2013	42
2014	44
2015	47
2016	55

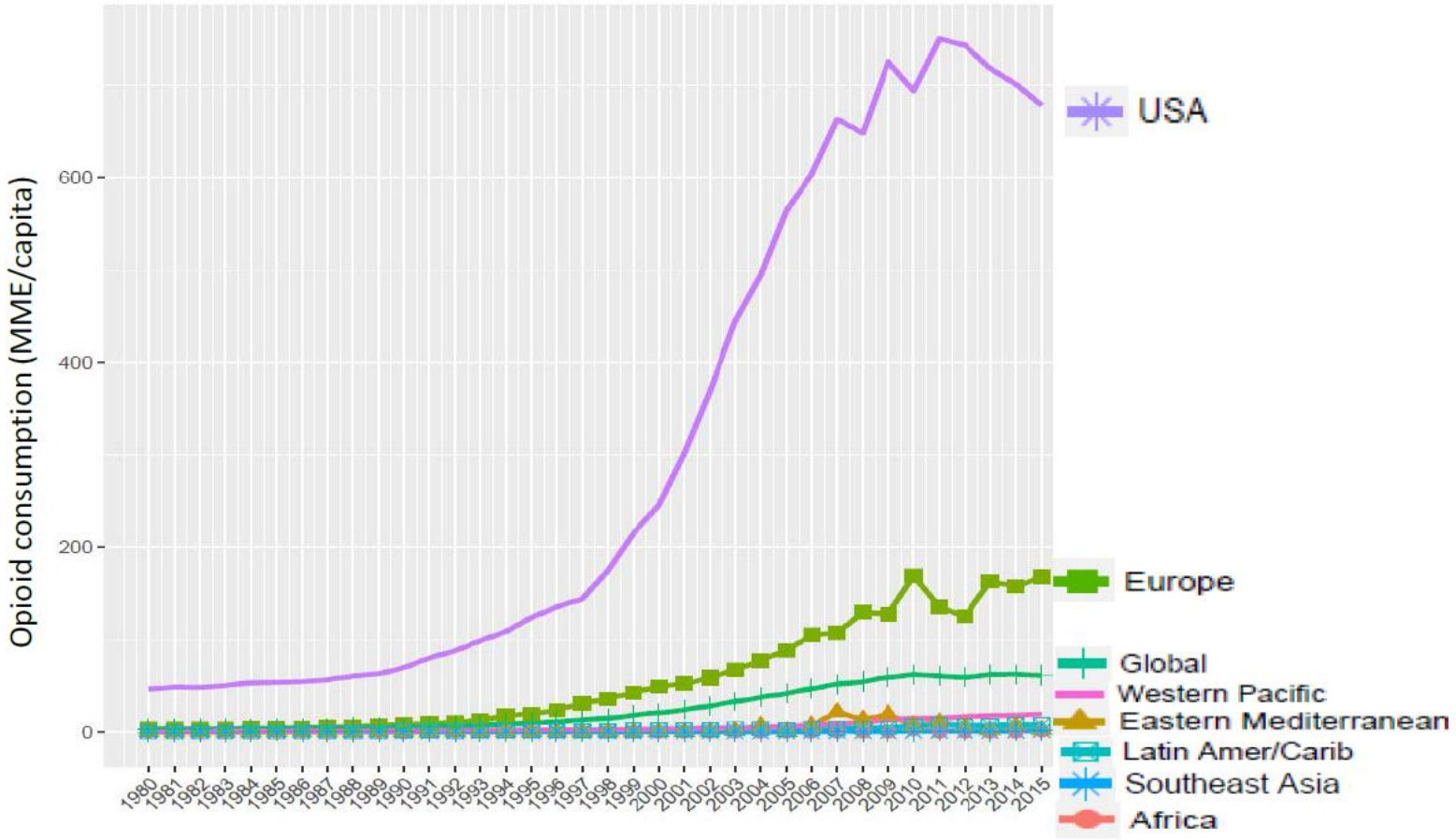
*These numbers do not include suicides.
*These numbers include ALL drugs, not just narcotics and opioids.
*Data received from ND Vital Records, Carmell Barth

NORTH DAKOTA DEPARTMENT of HEALTH

Prescription Drugs

NORTH DAKOTA DEPARTMENT of HEALTH

US prescription opioid use increased dramatically since the late 1990s and decreased slightly since 2011



Sources: International Narcotics Board; World Health Organization population data
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2017

Debbie Dowell, MD, MPH – Senior Medical Advisor, Division of Unintentional Injury Prevention, CDC, Vital Signs Town Hall presentation, July 11, 2017

NORTH DAKOTA DEPARTMENT of HEALTH

North Dakota's PDMP: Prescription Drug Monitoring System

PDMP or PMP: The PDMP is a secure and HIPAA-compliant online database of all Schedule II, III, IV, and V controlled substances dispensed in the state of North Dakota or for patients residing in North Dakota. All controlled substance prescriptions dispensed for a North Dakota resident are transferred to the PDMP data repository by the dispenser on a daily basis. All out-of-state pharmacies licensed with the North Dakota Board of Pharmacy also submit data on controlled substance prescriptions dispensed for North Dakota residents.

- 41 states plus the District of Columbia are connected through PDMP
  - Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, Nevada, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, and Wisconsin.
- Allows for the sharing of interstate prescription data
  - Means patients in MN who fill a prescription can be viewed by doctors in ND. Less chance of "doctor shopping" for prescriptions.

North Dakota PDMP Data

Year	Frequency
2014	1,399,902
2015	1,498,961
2016	1,412,234
2017	1,420,406

Gender	2014	2015	2016	2017	Total
Female	577,882	619,703	592,705	592,037	2,382,327
Male	820,796	878,016	817,882	827,356	3,344,050
Total	1,398,678	1,497,719	1,410,587	1,419,393	5,726,377

Data Source: ND PDMP Data

NORTH DAKOTA DEPARTMENT of HEALTH

Hospital Discharge

NORTH DAKOTA DEPARTMENT of HEALTH

National Surveillance

According to the CDC's *ANNUAL SURVEILLANCE REPORT OF DRUG-RELATED RISKS AND OUTCOMES UNITED STATES, 2017 **

All Drug Hospitalizations

- During 2014, an estimated 259,665 hospitalizations occurred for all unintentional, drug-related poisonings in the U.S., with an estimated age-adjusted rate of 79.2 per 100,000.
  - females, the age-adjusted rate was 87.0
  - males, the age-adjusted rate was 71.2

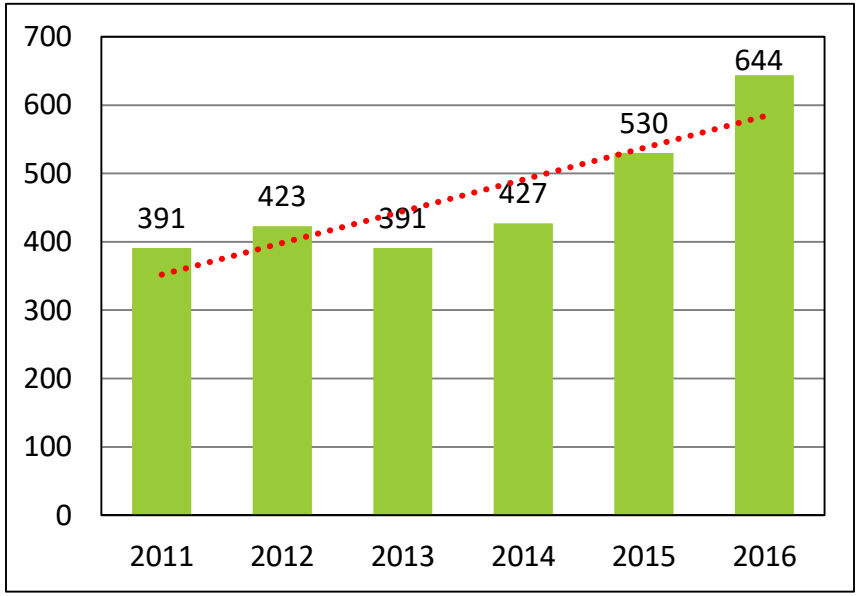
- By region, age-adjusted hospitalization rates for all unintentional, drug-related poisonings were:
  - 84.7 in the Midwest
  - 82.3 in the South
  - 81.7 per 100,000 in the Northeast
  - 68.0 in the West

*www.cdc.gov/drugoverdose/pdf/pubs/2017-cdc-drug-surveillance-report.pdf; p. 16

Opioid, Narcotic, and Illicit Drug (ONID) Surveillance Utilizing Hospital Discharge Data*

Year	# of people discharged due to ONID	# of new people presenting each year	# of people who were seen in previous years for ONID
2011	391	391	
2012	423	401	22
2013	391	371	20
2014	427	397	30
2015	530	498	34
2016	644	631	13

Gender	2011	2012	2013	2014	2015	2016
F	246	278	263	265	320	365
M	145	145	128	162	210	279
Total	391	423	391	427	530	644



*ND Hospital Discharge Data; Mike Benz, Kodi Pinks, Alicia Lepp

NORTH DAKOTA DEPARTMENT of HEALTH

Essence

ND Syndromic Surveillance Data*

* Includes Emergency Room and Outpatient Visits – depending on facility.

NORTH DAKOTA DEPARTMENT of HEALTH

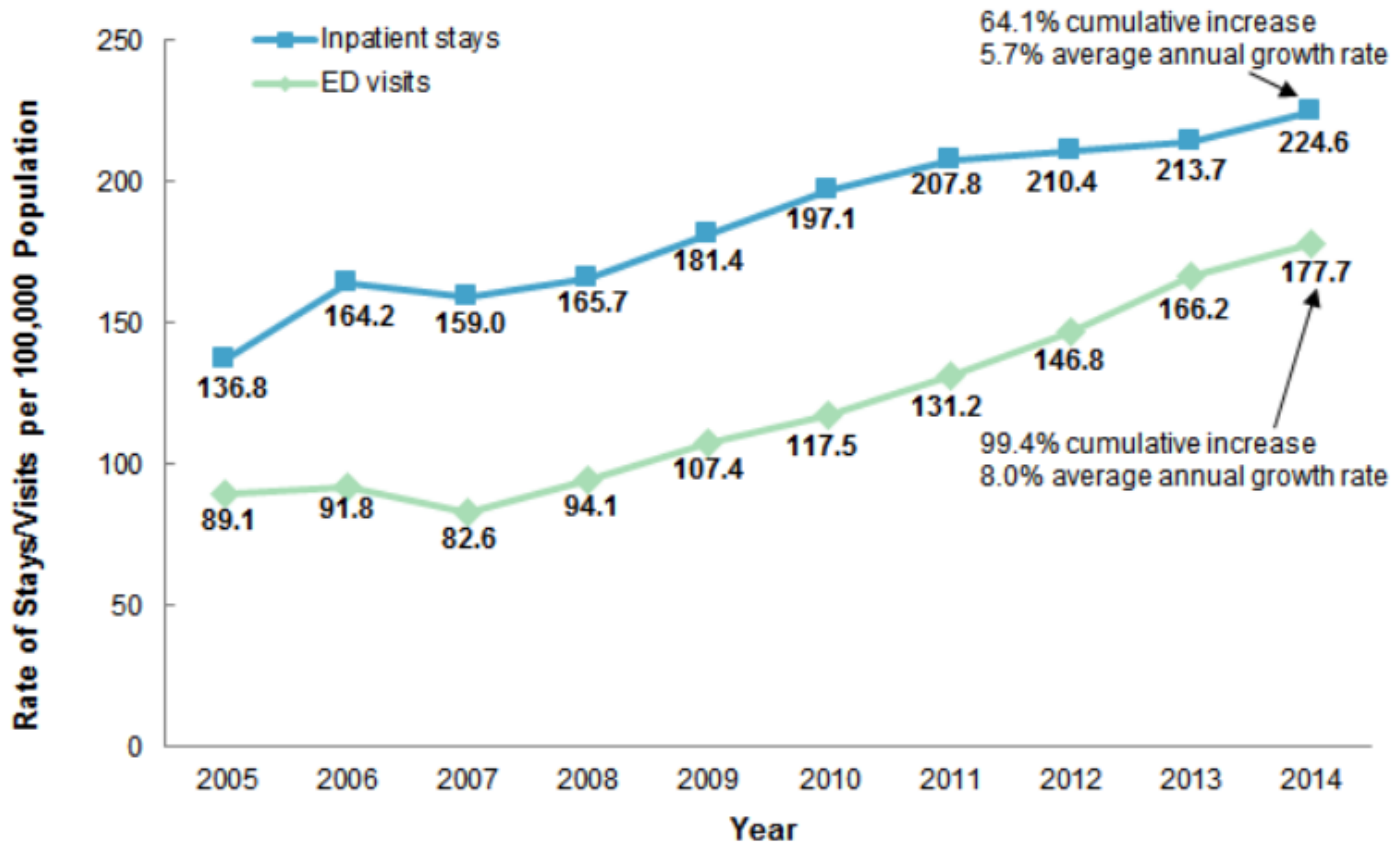
National Emergency Room Visits

Emergency Department (ED) Visits

- During 2014, an estimated 418,313 ED visits occurred for all unintentional, drug-related poisonings in the U.S.
  - estimated age-adjusted rate of 133.7 per 100,000
    - males, the age-adjusted rate was 127.9
    - females, the age-adjusted rate was 139.5.
  - By region, age-adjusted ED visit rates for all unintentional, drug-related poisonings were:
    - 154.0 per 100,000 in the Northeast
    - 153.7 in the Midwest
    - 128.5 in the West
    - 117.0 in the South

www.cdc.gov/drugoverdose/pdf/pubs/2017-cdc-drug-surveillance-report.pdf; page 16

Figure 1. National rate of opioid-related inpatient stays and emergency department visits, 2005-2014

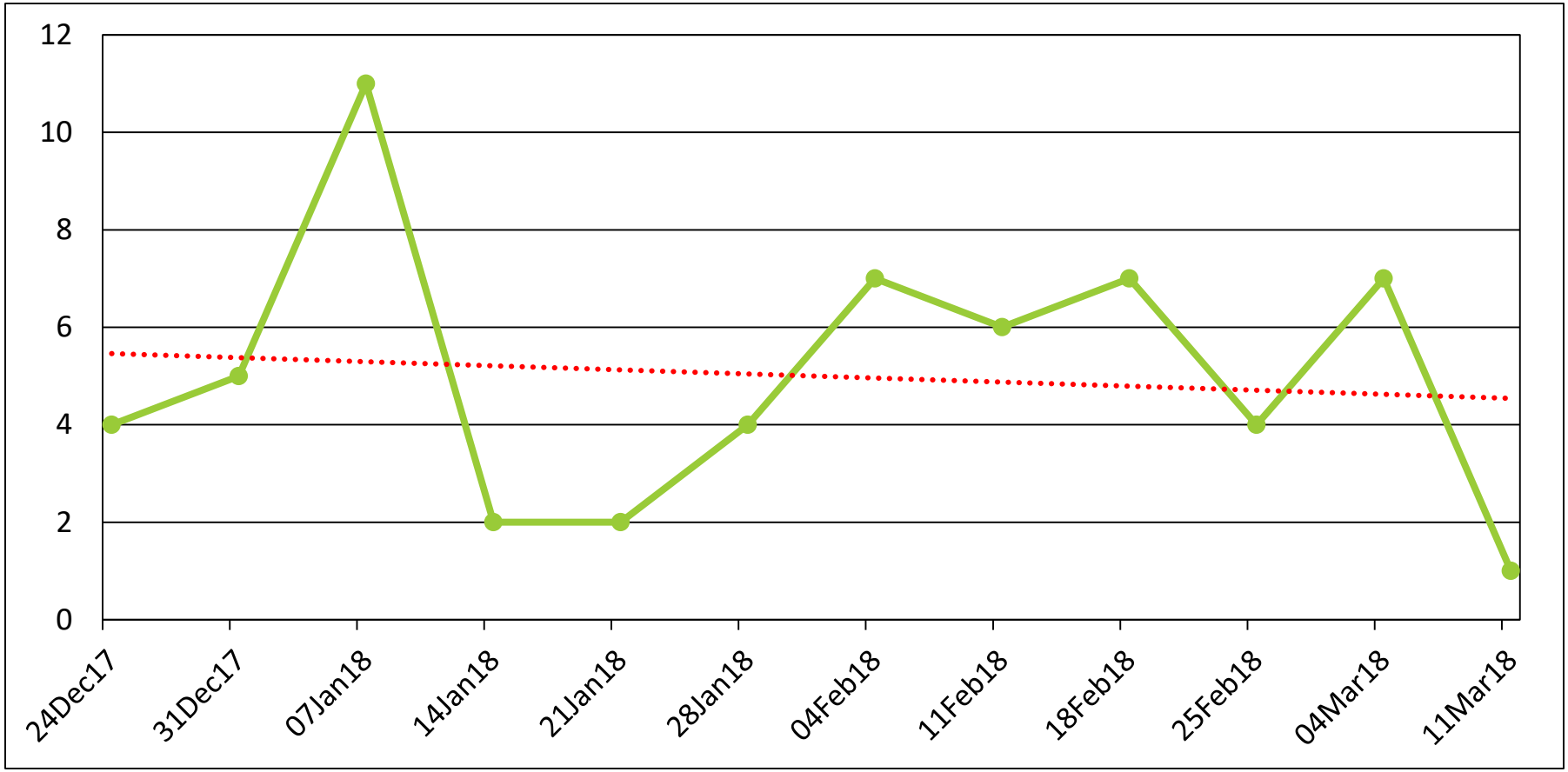


Abbreviation: ED, emergency department

Source: Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), HCUP Fast Stats, Opioid-Related Hospital Use (http://www.hcup-us.ahrq.gov/faststats/landing.jsp) based on the HCUP National (Nationwide) Inpatient Sample (NIS) and the HCUP Nationwide Emergency Department Sample (NEDS)

NORTH DAKOTA DEPARTMENT of HEALTH

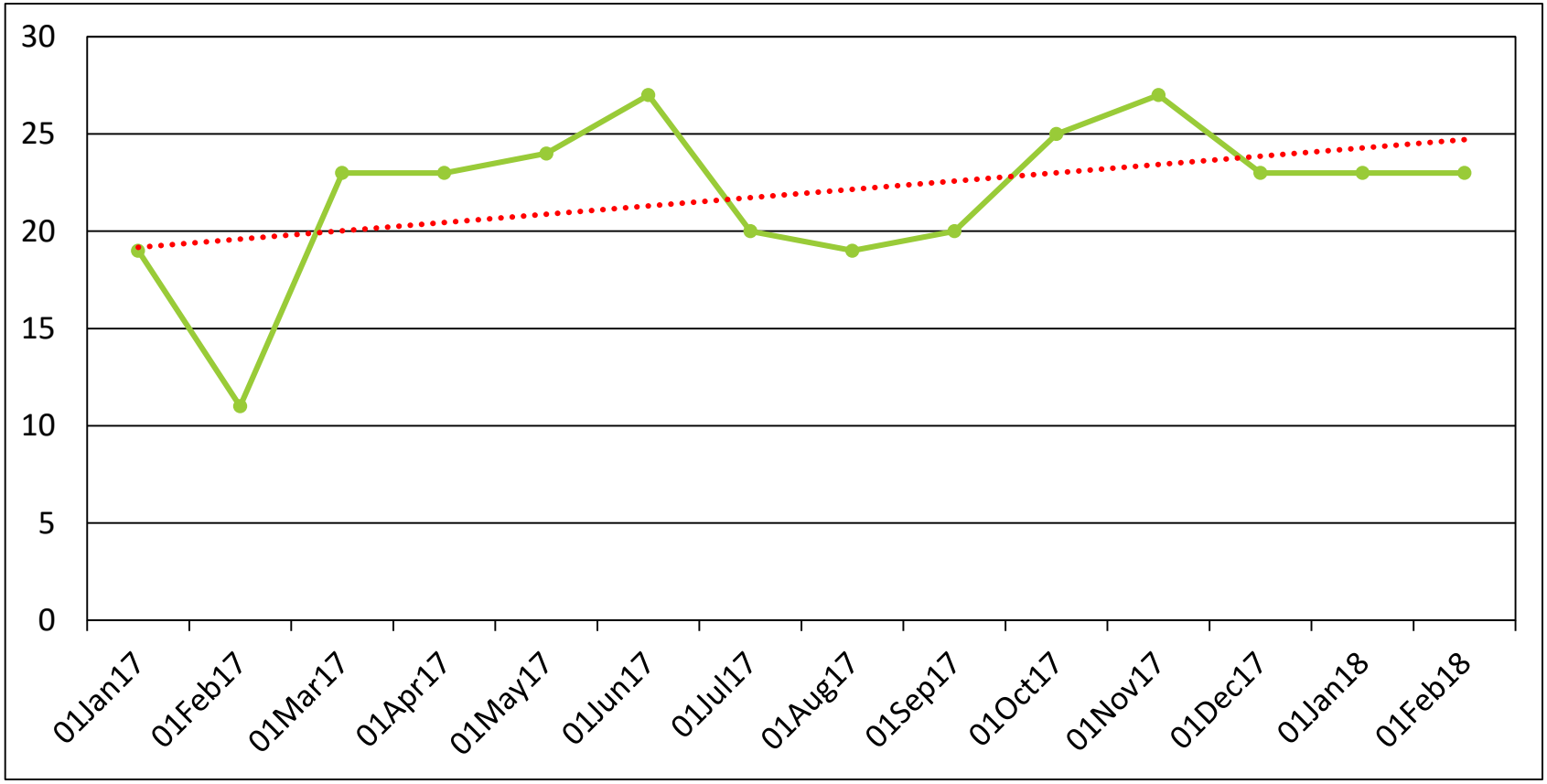
Patients meeting the Opioid Overdose #1 Syndrome definition by Week



Data Source: North Dakota Syndromic Surveillance System; Essence

NORTH DAKOTA DEPARTMENT of HEALTH

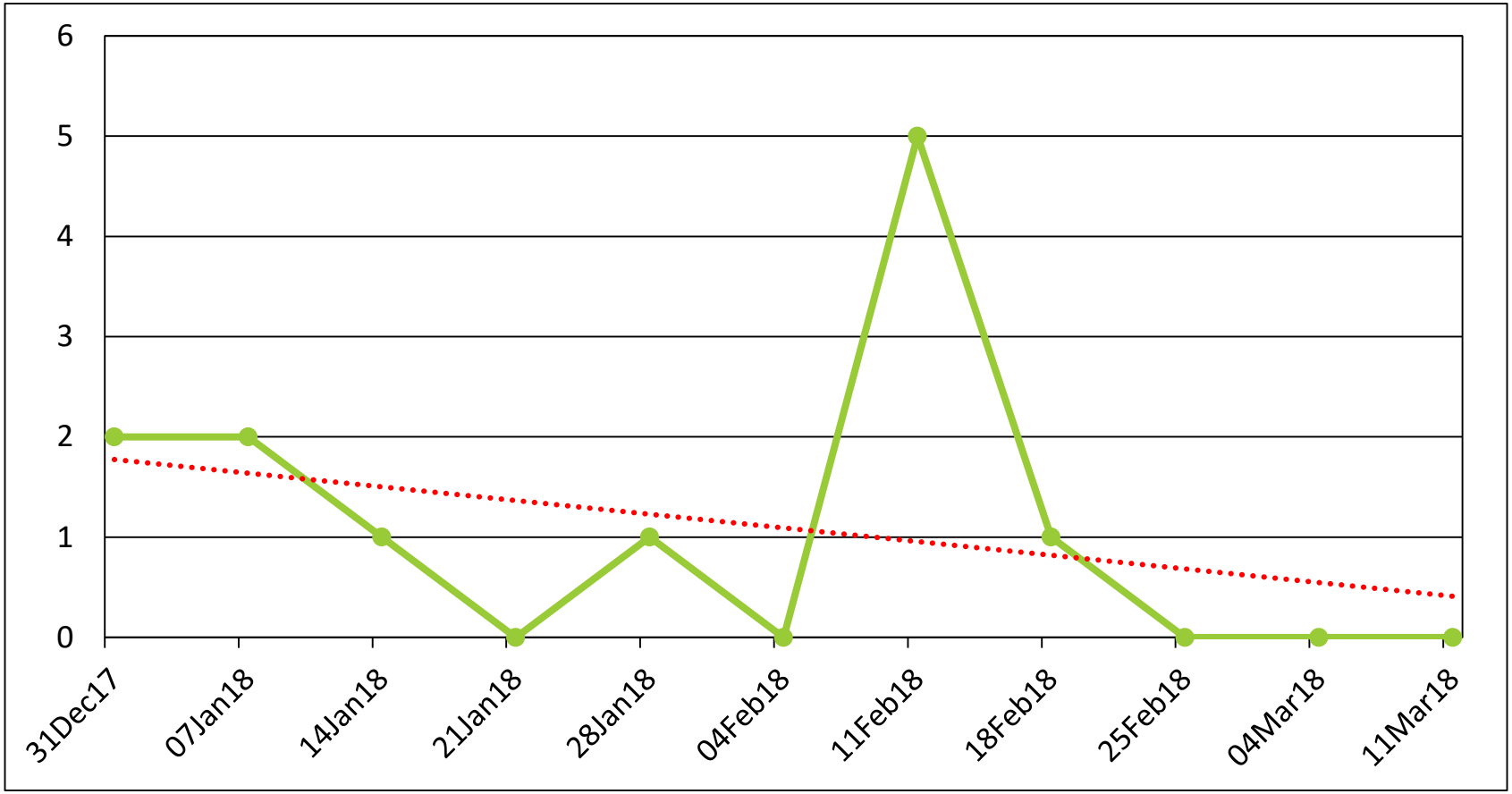
Patients meeting the Opioid Overdose #1 Syndrome definition by Month



Data Source: North Dakota Syndromic Surveillance System; Essence

NORTH DAKOTA DEPARTMENT of HEALTH

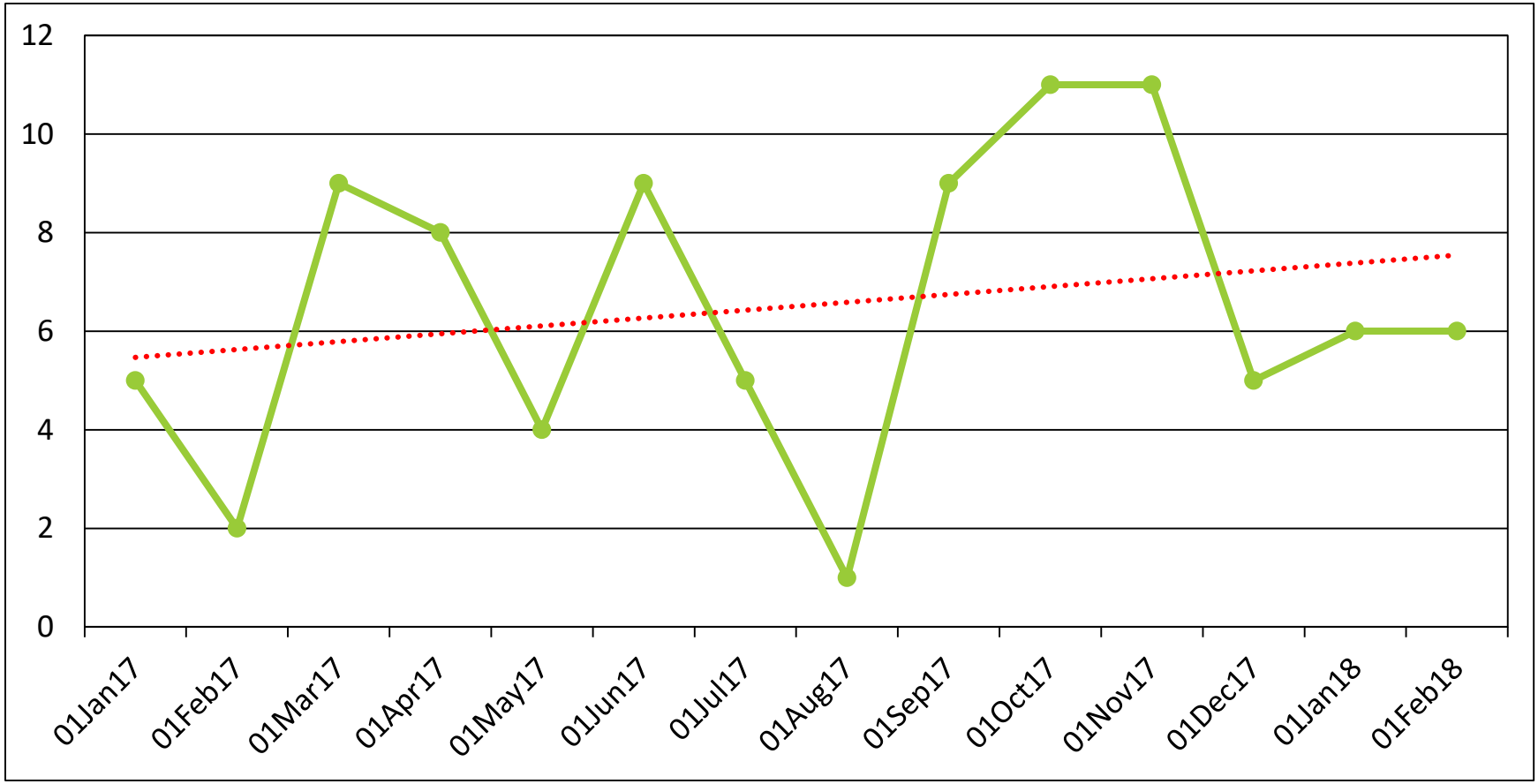
Patients meeting the Heroine Overdose #3 Syndrome definition by Week



Data Source: North Dakota Syndromic Surveillance System; Essence

NORTH DAKOTA DEPARTMENT of HEALTH

Patients meeting the Heroine Overdose #3 Syndrome definition by Month



Data Source: North Dakota Syndromic Surveillance System; Essence

NORTH DAKOTA DEPARTMENT of HEALTH

Soooooo……What should we do?

- We know our Data is not perfect
- We know our Data has some inherent flaws
- We know that most of the data comes with a list of caveats

Dress it up!!

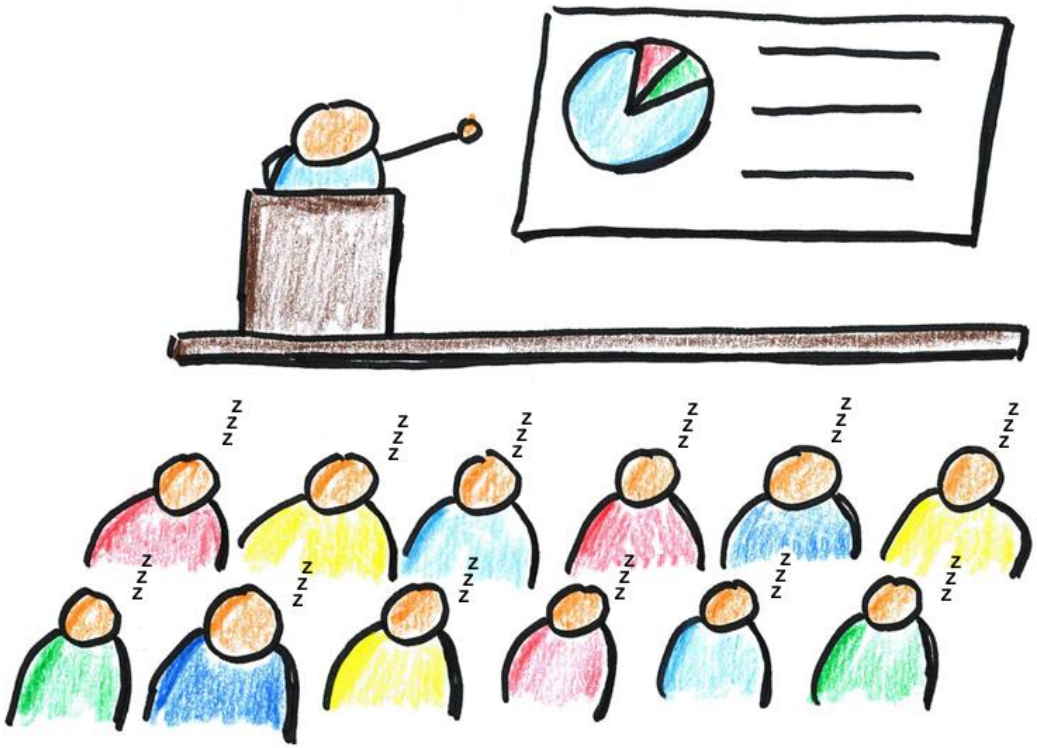
- It can still be used:
  - It can be used for monitoring trends
  - It allows for estimates of back ground levels
  - Data outside the norm will allow us to dig deeper into what is happening
  - Allows us to look for gaps in our systems and in our prevention efforts

Acknowledgements

- Carmell Barth
  - ND Vital Records
- Michelle Feist & Jill Baber
  - ND Essence
- Kodi Pinks, Mike Benz, & Alicia Lepp
  - ND Hospital Discharge Data
- Kathy Zahn
  - PDMP

NORTH DAKOTA DEPARTMENT of HEALTH

Any Questions??



NORTH DAKOTA DEPARTMENT of HEALTH